

## CLAIMS

1. A method comprising the steps of:  
triggering an embedding algorithm in response to a triggering event;  
receiving print data;  
5 reading printer configuration data;  
encoding the configuration data;  
embedding the encoded configuration data into the print data;  
sending the print data to a printhead; and  
printing the print data as a visible image comprising the embedded encoded  
10 configuration data.
2. The method of claim 1, wherein the triggering step comprises initiating a  
triggering event via a self-diagnosing algorithm.
- 15 3. The method of claim 1, wherein the triggering step comprises initiating a  
triggering event by activating an alarm by a sensor.
4. The method of claim 1, wherein the triggering step comprises initiating a  
triggering event by detecting predetermined at least one of keywords and symbols within  
20 print data.

5. The method of claim 1, wherein the triggering step comprises initiating a triggering event by detecting the print data originates from a predetermined source.

6. The method of claim 1, wherein the triggering step comprises initiating a triggering event in response to detecting a predetermined time, and wherein the encoded configuration data comprises a time stamp.

7. The method of claim 1, wherein the triggering step comprises initiating a triggering event in response to detecting a predetermined date, and wherein the encoded configuration data comprises a date stamp.

8. The method of claim 1, wherein the triggering step comprises initiating a triggering event by recognizing a set parameter to embed data in the print data.

9. The method of claim 1, wherein the triggering step comprises initiating a triggering event by detecting the activation of a button.

10. The method of claim 9, wherein the activation of the button comprises a detection of activation of a physical button on a printer device.

11. The method of claim 9, wherein the button comprises a “soft” button in a software diagnostic application.

12. The method of claim 1, further comprising the steps of:

scanning the printed data to provide scanned data;

analyzing the scanned data to recognize embedded data; and

providing encoded data corresponding to the recognized embedded data.

13. The method of claim 12, further comprising the step of using the encoded data to diagnose printer problems.

14. An apparatus comprising:

a data embedding application;

a controller/processor unit communicatively coupled to the data embedding application;

5 a data memory communicatively coupled to the controller/processor unit;

a print engine communicatively coupled to the controller/processor unit;

a printhead communicatively coupled to the print engine; and

a triggering event detector, communicatively coupled to the data embedding application and the controller/processor unit, for printing print data comprising embedded data in response to detecting a triggering event at the apparatus.

15. The apparatus of claim 14, further comprising a self-analysis module communicatively coupled to the controller/processor unit, the self-analysis module for providing a triggering event.

16. The apparatus of claim 14, further comprising a supply monitoring module communicatively coupled to the controller/processor unit, the supply monitoring module for providing a triggering event.

17. The apparatus of claim 14, wherein the data memory comprises:
- a configuration database including configuration data for the triggering event detector and for the data embedding application; and
  - a document queue.

18. A printing system comprising:

at least one networked device;

a network interface, communicatively coupled to the at least one networked device;

5 a data embedding application;

a controller/processor unit communicatively coupled to the data embedding application and to the network interface;

a data memory communicatively coupled to the controller/processor unit;

a print engine communicatively coupled to the controller/processor unit;

10 a printhead communicatively coupled to the print engine; and

a triggering event detector, communicatively coupled to the data embedding application and the controller/processor unit, for printing print data comprising embedded data in response to the triggering event detector detecting a triggering event.

15 19. The system of claim 18, further comprising a document source detection module communicatively coupled to the controller/processor unit, the document source detection module for providing a triggering event.

20. The system of claim 18, further comprising a supply monitoring module communicatively coupled to the controller/processor unit, the supply monitoring module for providing a triggering event.

21. The system of claim 18, wherein the data memory comprises:  
a configuration database including configuration data for the triggering event detector and for the data embedding application; and  
a document queue for storing documents received from the at least one networked device.

22. A computer readable medium including computer instructions for driving a printer, the computer instructions comprising instructions for:

detecting a triggering event;

receiving print data;

5 reading printer configuration data;

encoding the configuration data;

in response to detecting the triggering event, inserting the configuration data into the print data;

10 sending the print data to a printhead; and

printing the print data.

23. The computer readable medium of claim 22, wherein the detecting of a triggering event comprises detecting a self-diagnosing event.

15 24. The computer readable medium of claim 22, wherein the detecting of a triggering event comprises detecting an activation of an alarm by a sensor.

25. The computer readable medium of claim 22, wherein the detecting of a triggering event comprises detecting predetermined at least one of keywords and symbols within  
20 print data.



26. The computer readable medium of claim 22, wherein the detecting of a triggering event comprises detecting the print data originates from a predetermined source.